

Claims

1. An array of nozzles for use in the coating of a moving web-like material by means of high-pressure spraying techniques, which array has one or more nozzle rows transverse to the path of the web, each nozzle (1) being manufactured by forming a piece having a tapered duct ending in a closed tip, a transverse V-shaped groove (3) having been subsequently machined in the tip, characterised in that the angle of the V-shaped groove (3) is in the range from 25 to 50°, such as 35 to 45°.
2. An array of nozzles as defined in claim 1, in which the transverse area of the nozzle orifice is oval.
3. An array of nozzles as defined in claim 1 or 2, in which the ratio of the maximum diameter to the minimum diameter of the nozzle orifice is distinctly over 1, such as in the range from 1.2 to 3, especially 1.5 to 2.5.
4. An array of nozzles as defined in any of the preceding claims, in which the nozzle orifice dimensions are 1 to 0.3 mm x 0.5 to 0.1 mm, such as 0.75 to 0.4 mm x 0.35 to 0.15 mm.
5. An array of nozzles as defined in any of the preceding claims, the nozzle being a secondary nozzle (1), to which a preliminary nozzle (2) has been connected, the preliminary nozzle acting as a preliminary diffuser of the jet.
6. An array of nozzles as defined in claim 5, the preliminary nozzle (2) comprising an expanding or tapered flow duct.
7. An array of nozzles as defined in claim 5 or 6, in which the area of the flow orifice of the preliminary nozzle (2) is at the most 1.1 times the transverse area of the flow orifice of the secondary nozzle (1), preferably at the most equal to the transverse area of the flow orifice of the nozzle proper.
8. An array of nozzles as defined in any of claims 5 to 7, in which the diameter of the orifice of the preliminary nozzle (2) is in the range from 0.1 to 1 mm, such as 0.25 to 0.55 mm.
9. An array of nozzles as defined in any of claims 5 to 8, in which the area of the orifice of the preliminary nozzle (2) accounts for at the most 50 %, such as at the most 20 % of the area of the orifice of the secondary nozzle (1).

05-10-2004

05-10-2004 08:59

MISTA-BERGGREN OY AB

+358-9-6933844

K-645 S.004/004

F10300702

T-513

7

10. Use of an array of nozzles as defined in any of the preceding claims for coating paper.

AMENDED SHEET

05-10-2004 08:59

05-10-2004 08:59